REMARKS

This is a response to the Office action dated March 24, 2005 and a submission in support of a request for continued examination. Claims 1-7 and 22-23 are presented for examination. Applicants respectfully request reexamination and reconsideration of application.

In paragraph nos. 2-3 of the Office action, the Examiner rejects claims 1 and 23 under 35 USC 103(a) as being unpatentable over El-Batal et al., U.S. Patent Application Publication No. US2003/0221061 (El-Batal) and Bicknell et al., U.S. Patent Application Publication No. US2003/0193776 (Bicknell).

Claims 1 and 23 are nonobvious over El-Batal and Bicknell. As stated in Office action, El-Batal does not disclose a microcontroller in a coupling circuit but Bicknell makes up this deficiency.

However, Bicknell cannot establish an effective date of earlier than the application filing date of March 20, 2003 and applicants have a date of invention earlier than March 20, 2003. The Declaration of Paul Thomas Petersen, Declaration of Douglas John Fox, and Exhibits A - C and E - F establish a date of invention for claims 1 and 23 before Bicknell's effective filing date.

Bicknell's earlier provisional filing date does not matter since it fails to meet enablement requirements of 35 USC 112. Part of the problem is its brevity. It's three pages long and each page says little. First, the title, Conversion Capability in Nautilus Storage Subsystem tends to conjure up thoughts of exercise machines, while page 1 only helps us understand exercise equipment is not at stake, but Seagate Technology's plan to add a second bridge card controller to a single channel system with one bridge card controller to provide dual channel access and that a multiplexer card assembly will be required. It states an engineering objective in the future rather than enabling details. There is also no mention what type of storage devices are involved except a passing comment it might also apply to a SATA/PATA conversion. The remaining pages 2-3 just list mechanical requirements to fit a multiplexer card assembly between a backpanel

1 and a drive. Further, Bicknell's provisional makes no mention of a microcontroller

2 adapted to control a mux. In view of the above, the effective date of Bicknell is the later

3 application filing date which is too late in view of our date of invention, and claims 1 and

4 23 are allowable over El-Batal and Bicknell.

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7 In paragraph no. 4 of the Office action, the Examiner rejects claims 1, 3, 4, 22, and 23 under 35 USC 103(a) as being unpatentable over El-Batal and Steinmetz et al., U.S. Patent Application Publication No. US2003/0193776 (Steinmetz).

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9 Claim 1 is also nonobvious over El-Batal and Steinmetz. As conceded in Office action,
10 El-Batal does not disclose a microcontroller in a coupling circuit and this deficiency is
11 not cured by Steinmetz.

12 Steinmetz's microcontroller 1418 is not adapted to control coupling circuit switches.

13 Figure 14B of Steinmetz shows two lines between the microcontroller 1418 and the 2:1

14 mux 1412. The Office action has assumed they are control lines, but Steinmetz fails to

15 state their function (see paragraph no. 0099). We should reconsider this assumption in

16 view of relevant literature. Serial ATA II: Port Selector Revision 1.0 28-July-2003 is

17 relevant since it shows a port selector (i.e., a mux) in Figure 1 and states the mux

18 allows two different host ports to connect to the same storage device. It also tells us the

19 active host selects a port by either a side-band or a protocol-based port selection

20 mechanism. A side-band mechanism means mux control is out of the data path. It also

21 requires a single select line from the microcontroller to the 2:1 mux, pulled high to

22 activate one host port and low to activate the other. Yet Steinmetz shows two lines in

23 Figure 14B. This suggests that side-band mechanism is not disclosed in Steinmetz. On

24 the other hand, protocol-based port selection is completely consistent with Figure 14B.

25 Protocol-based selection means the host controls the mux in the data path. Protocol-

26 base selection explains why there are two lines in Steinmetz since two status lines

27 would confirm a signal is present (i.e., a host port is plugged in) and to identify which

28 host port is active. Thus, Steinmetz in conjunction with the relevant literature shows the

29 two lines are status lines, and Steinmetz controls the mux through the storage shelf

30 routers rather than through the microcontroller.

There are also no countervailing reasons suggesting the two lines are mux control lines. Steinmetz never suggests the microcontroller 1418 receives information from its storage shelf routers to control the mux. Instead, Steinmetz states the ATA commands and data are received by the path controller card in the data path (e.g., its primary serial link 1404) (paragraph no. 0099). Steinmetz also never suggests management links 1406 and 1410 are inputs to the microcontroller 1418 for control of the mux 1412. Steinmetz only states a monitoring role for the microcontroller 1418. Steinmetz states management links 1406 and 1410 are inputs to the microcontroller 1418 for monitoring the temperature of the disk drive environment, controlling a fan within the disk drive carrier, and activating various LED on the exterior of the disk drive enclosure (paragraph no. 0099). Thus Steinmetz's microcontroller is not adapted to control coupling circuit switches as recited in claim 1, but adapted to monitor other components. In view of the above, claim 1 and its dependent claims 3, 4 are patentable over El-Batal and Steinmetz. Claim 22 and 23 are patentable for reasons similar to those presented in connection with claim 1.

In paragraph no. 5 of the Office action, the Examiner rejects claims 3-7 and 22 under 35 USC 103(a) as being unpatentable over El-Batal and Bicknell as applied to claim 1 above, and further in view of Cargemel et al., US Patent No. 6,295,609 (Cargemel).

In response, applicants respectfully submit that dependent claims 3-7 and claim 22 are patentable for reasons similar to those presented in connection with claim 1, and that Cargemel fails to make up the basic deficiency of El-Batal and Bicknell.

In paragraph no. 6 of the Office action, the Examiner rejects claims 5-7 under 35 USC 103(a) as being unpatentable over El-Batal and Steinmetz as applied to claim 1 above, and further in view of Cargemel.

Applicants again submit that dependent claims 5-7 and claim 22 are patentable for reasons similar to those presented in connection with claim 1, and that Cargemel fails to make up the basic deficiency of El-Batal and Bicknell.

1   Please call to arrange an interview to discuss this response, and if you have any
2   question, comment, or it will expedite prosecution.
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